

FIG. 1

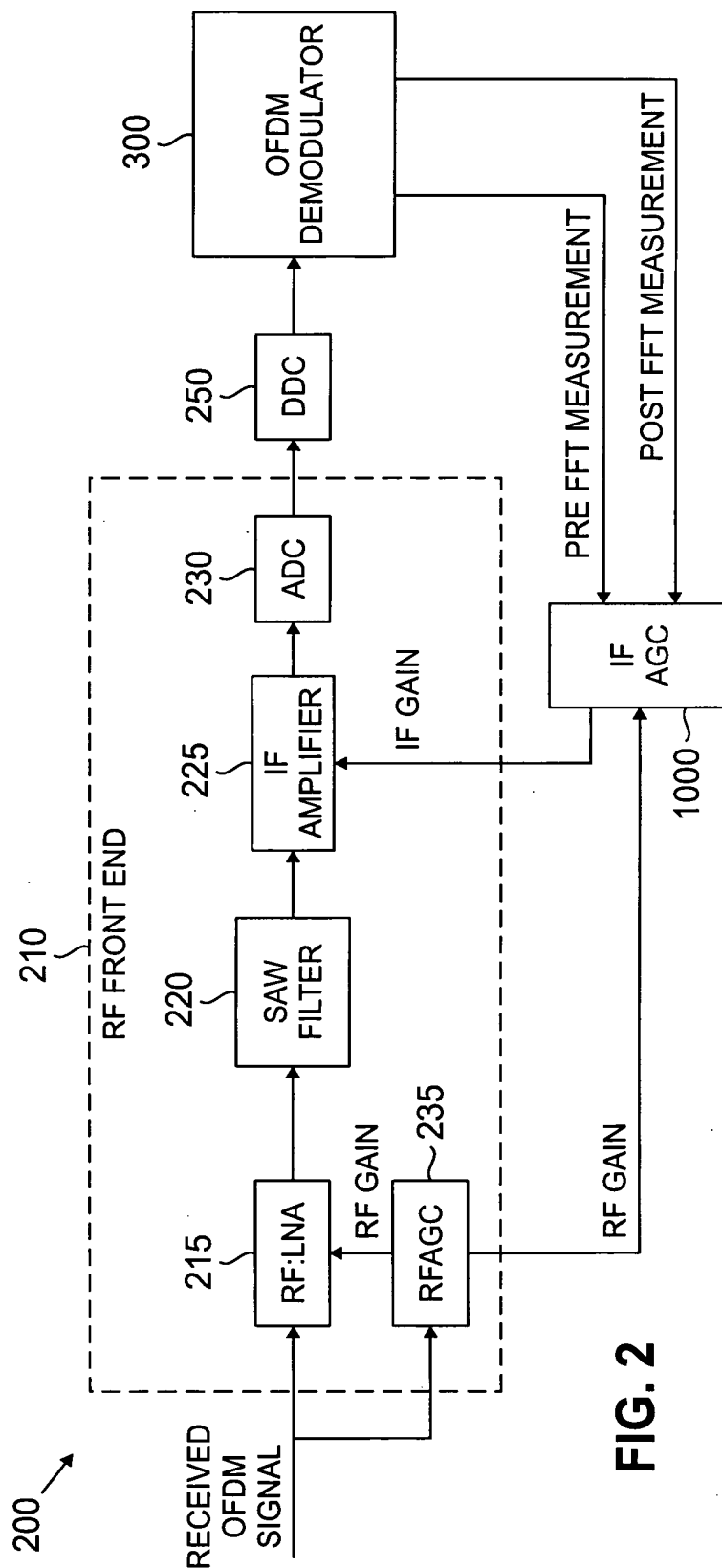


FIG. 2

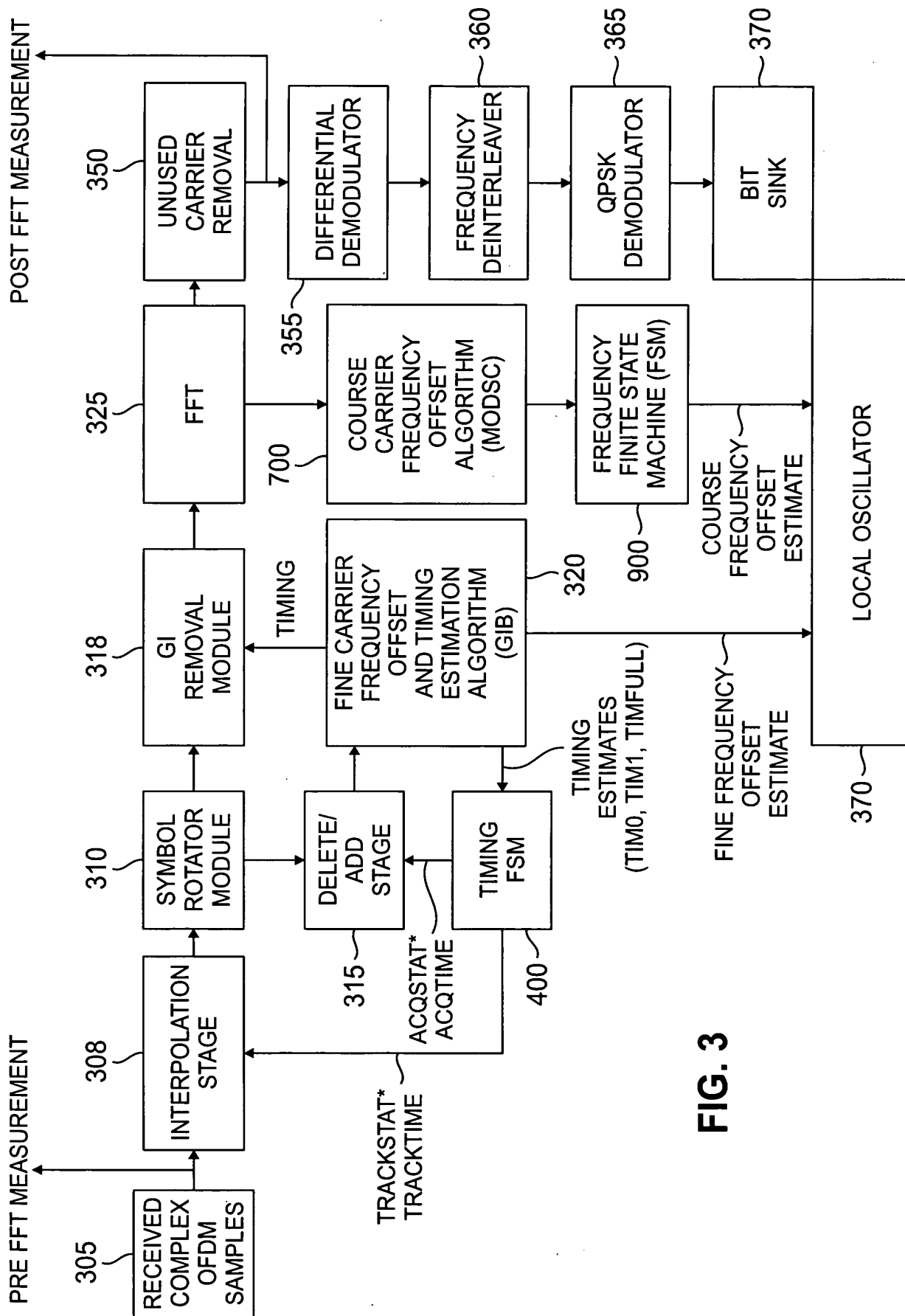


FIG. 3

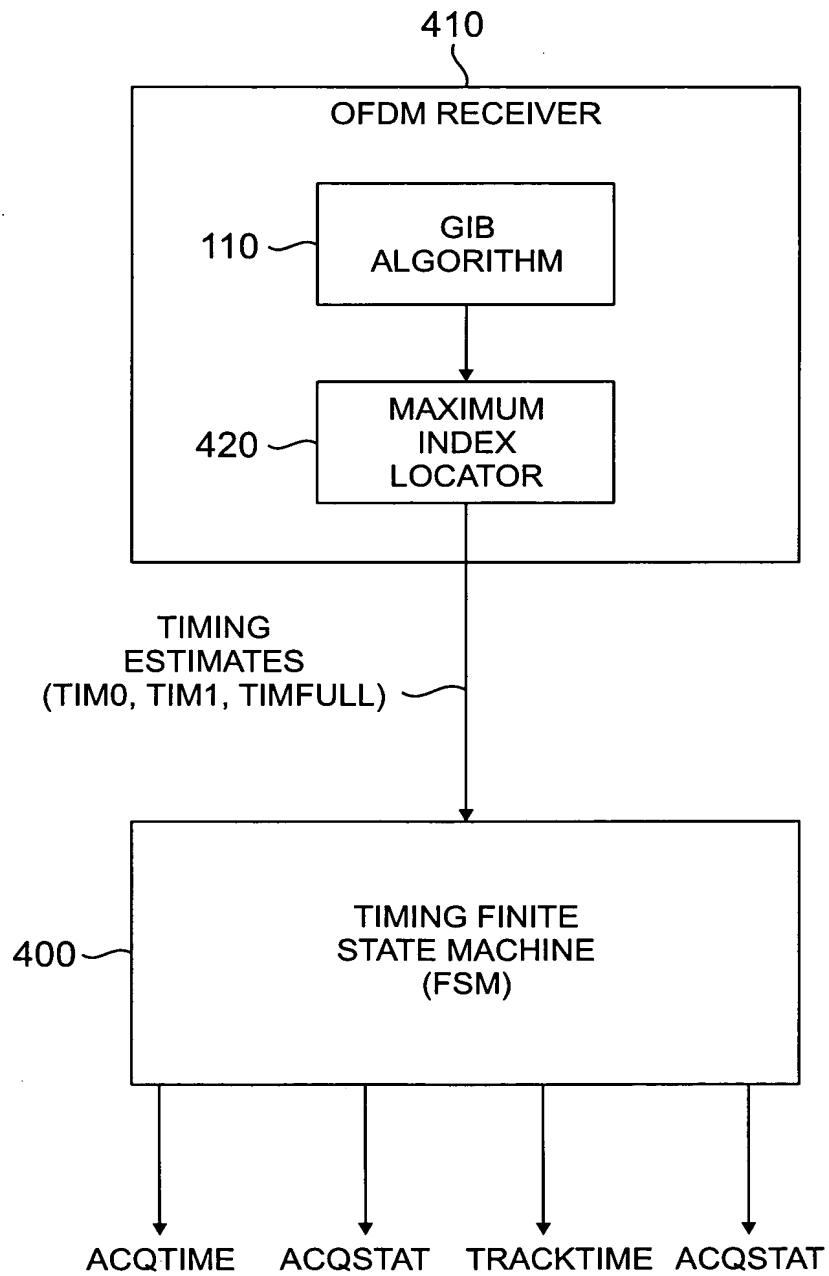
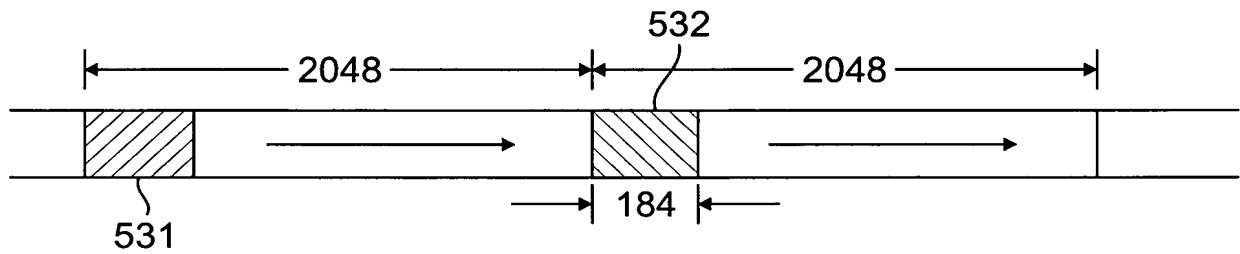
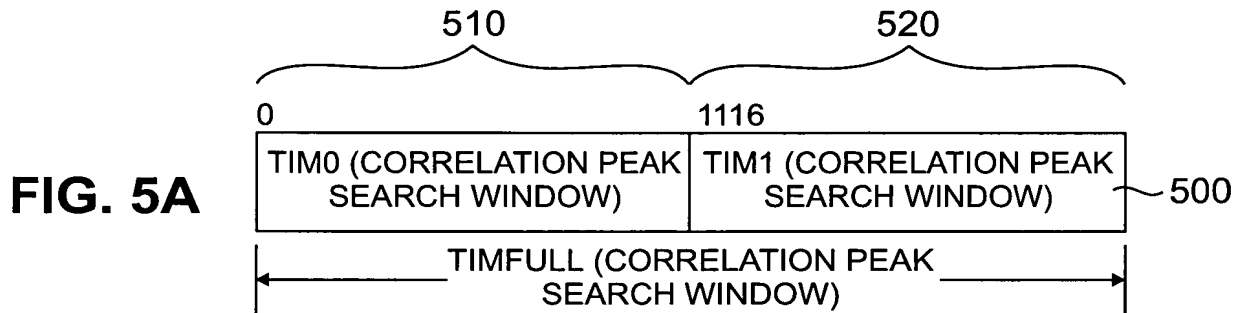
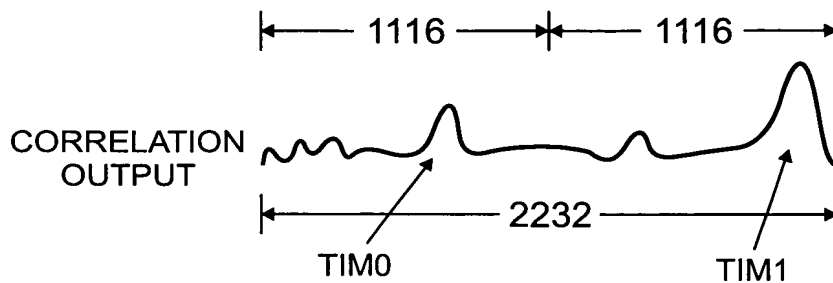


FIG. 4

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CORRELATION OF 184 SAMPLES SPACED
2048 SAMPLES APART. THE PROCESS IS
REPEATED TO GET 2232 SAMPLE
CORRELATION OUTPUT AS SHOWN BELOW.

FIG. 5B

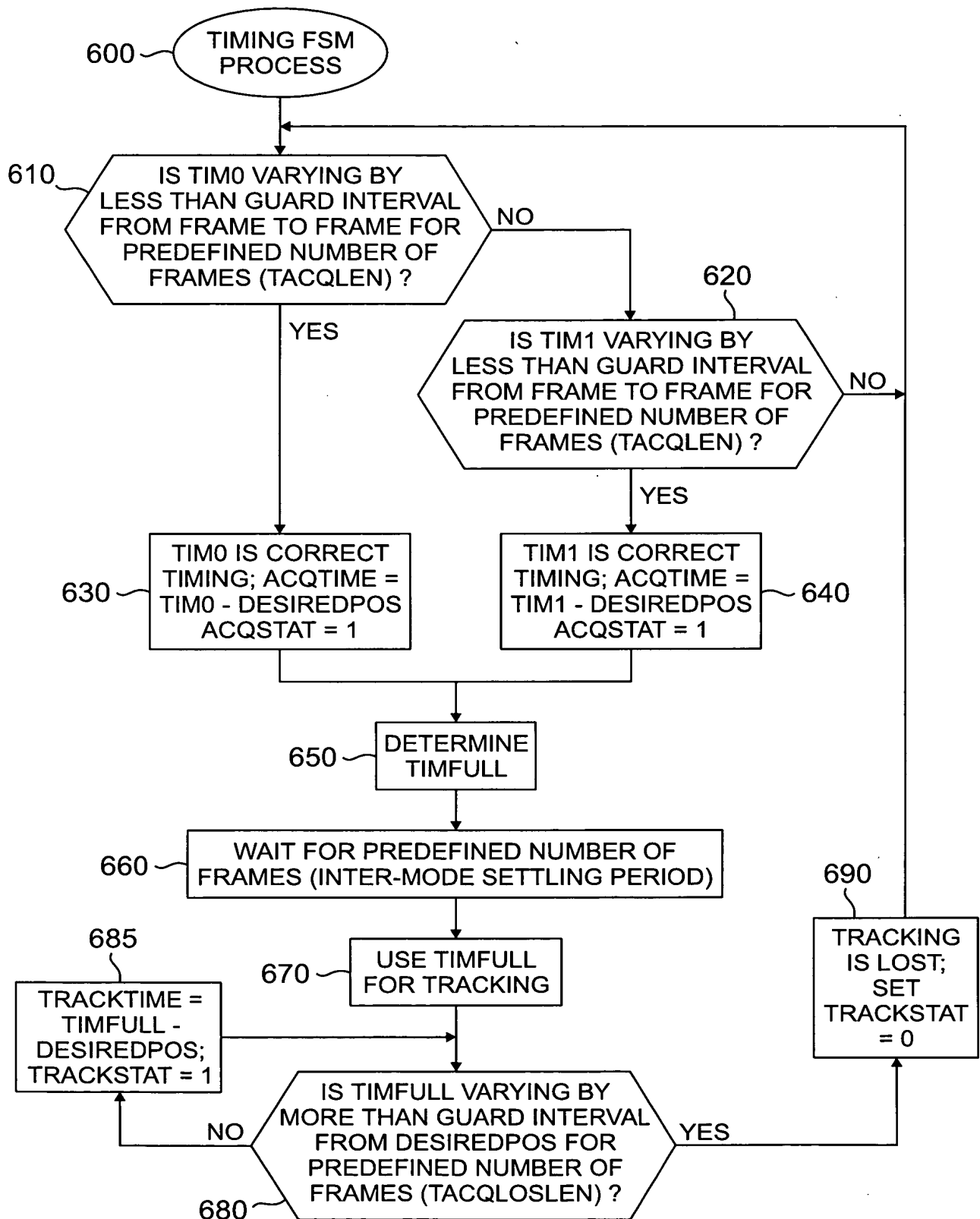


FIG. 6

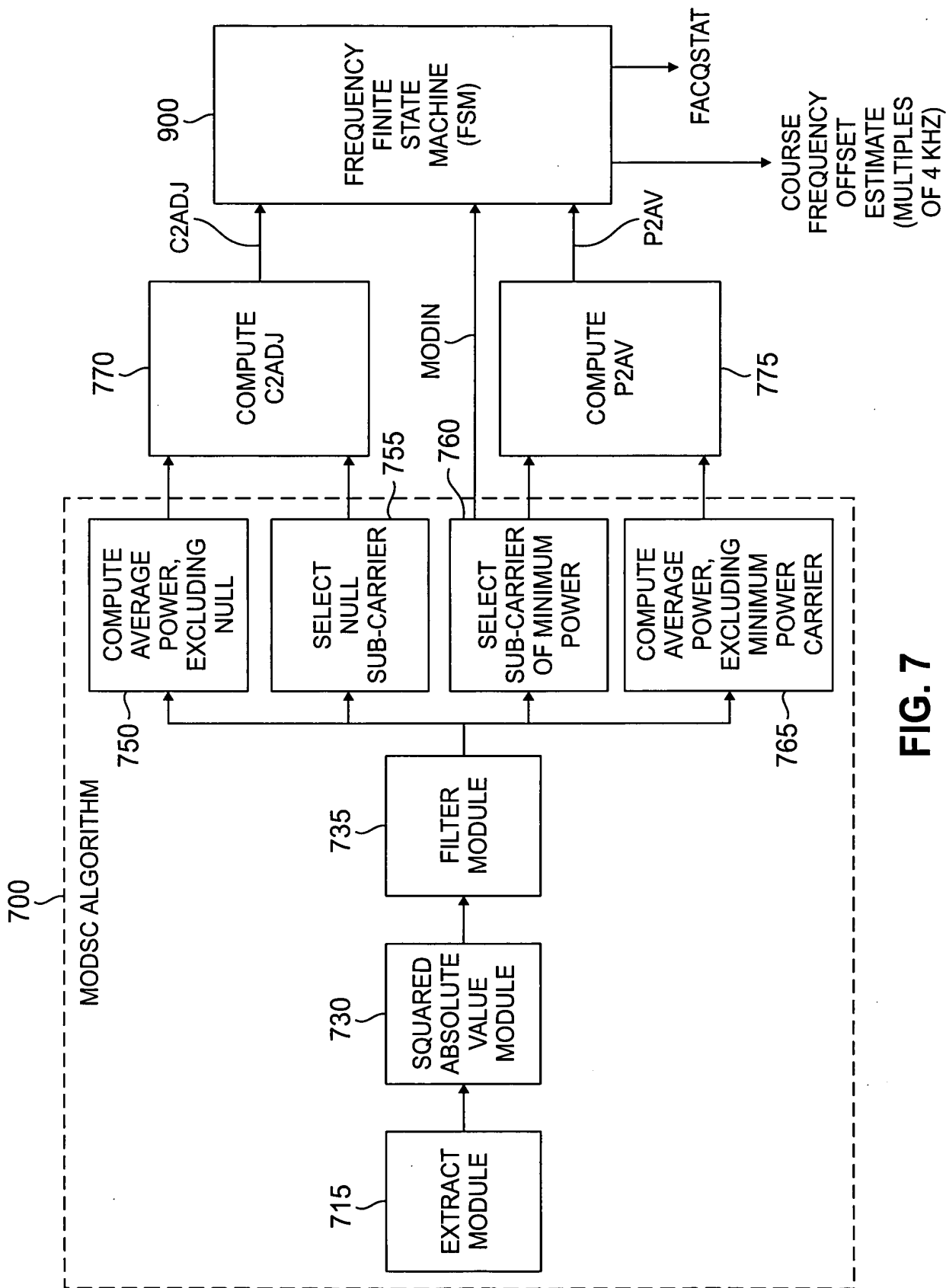


FIG. 7

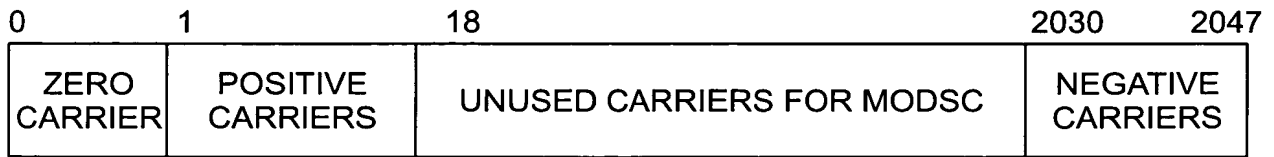
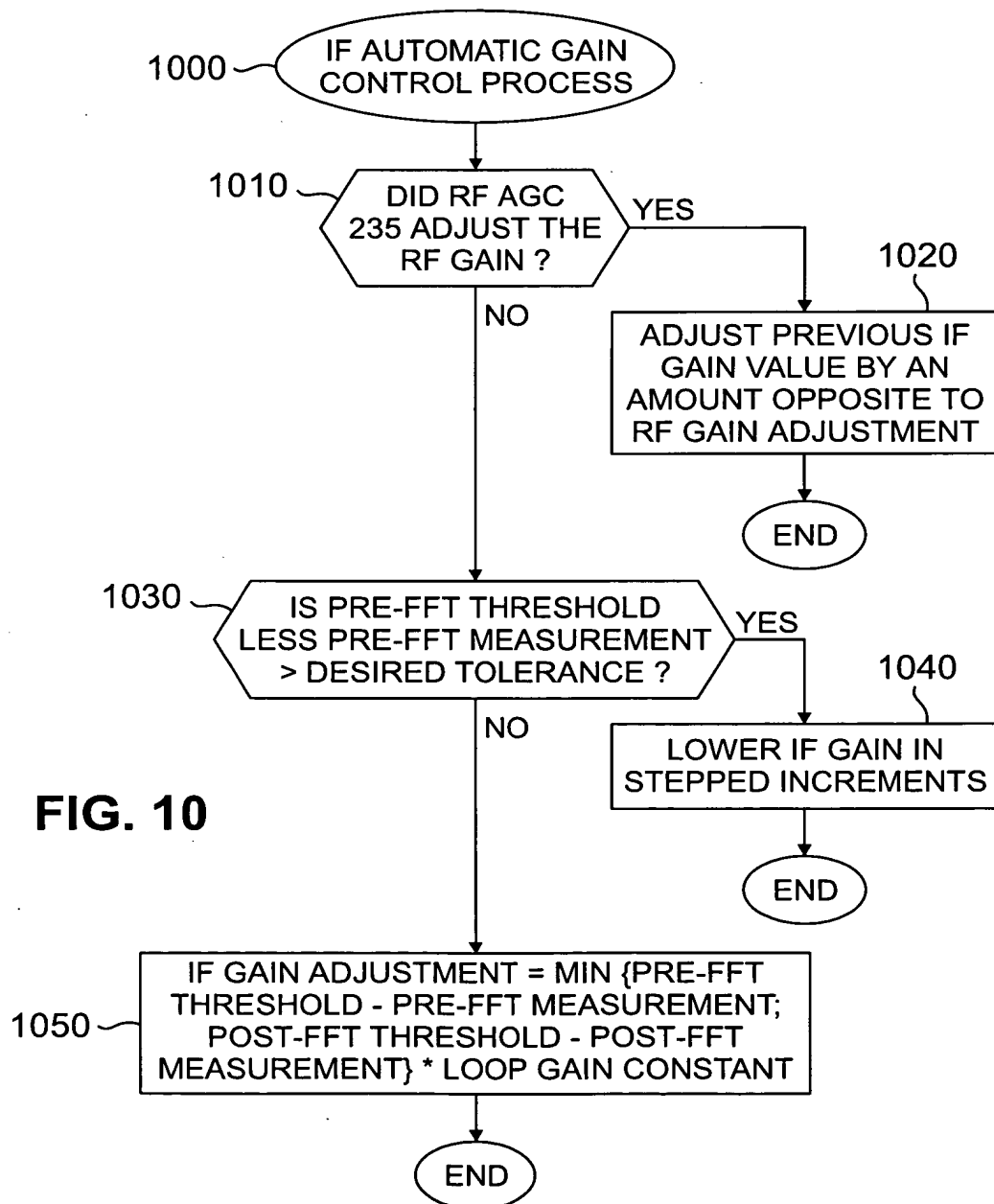


FIG. 8



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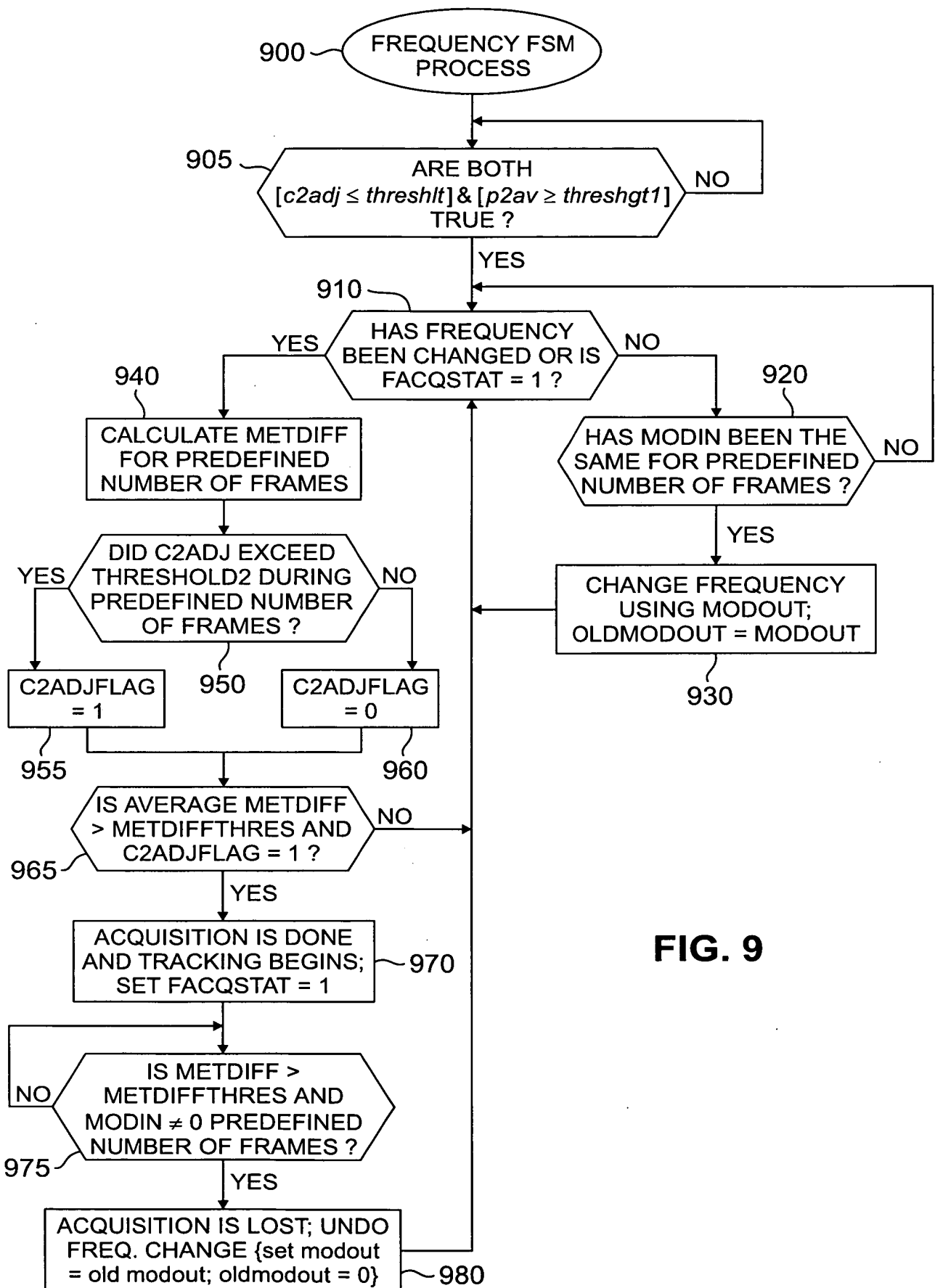


FIG. 9

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```

INPUT_PORT(1) register float *Prepower;
INPUT_PORT(2) register float *Postpower;
INPUT_PORT(3) register float *RFgain;
OUTPUT_PORT(1) register float *Output; /*IF AGC Gain in dB*/

```

```

BLOCKFACTOR long BlockFactor;

```

```

PARAMETER(1) float OutputIntervalWidth; /*71 dB*/
PARAMETER(2) float SetPointdBPre;      /*42.2*/
PARAMETER(3) float SetPointdBPost;     /*32.2*/
PARAMETER(4) float Kagc;                /*0.25*/
PARAMETER(5) float PreDropdB;          /*3.0*/
PARAMETER(6) long WaitTime;             /*8 OFDM Frames!!*/

```

```

STATE float oldoutput;
STATE float oldrfgain;
STATE long counter;

```

```

#include <math.h>

```

```

void init ofdmagccontrol2()
{
/*initialize Sum*/
oldoutput = 0.0;
counter = WaitTime;
}

```

```

void ofdmagccontrol2()
{
register float dbinpre, dbinpost, err, rfgain, output;
float HalfInterval = (OutputIntervalWidth / 2.0);

```

FIG. 11A

LOOP(BlockFactor)

```

printf("-----IFbeg-----\n");
dbinpre = *Prepower++; dbinpost = *Postpower++;
rfgain = *RFgain++;

printf("prepower = %f, post = %f, rfgain = %f\n", dbinpre, dbinpost, rfgain);
if((rfgain - oldrfgain) != 0.0)
{
    output = oldoutput - (rfgain - oldrfgain);
    printf("ifgain = -rfdiff = %f, oldrfgain = %f\n", output, oldrfgain);
}
else if ((SetPointdBPre-PreDropdB - dbinpre <= 0.0) && (counter >= WaitTime))
{
    output = oldoutput - (PreDropdB + 2.0);
    printf("ifgain = due to Pre = %f\n", - PreDropdB);
    counter = 0;
}
else
{
    counter++;
    if(SetPointdBPre - dbinpre < SetPointdBPost - dbinpost)
        err = SetPointdBPre - dbinpre;
    else
        err = SetPointdBPost - dbinpost;
    err = Kgc*err;
    output = oldoutput + err;
    printf("output = %f\n", output);
}

if(output >= HalfInterval)
    output = HalfInterval;
else if (output <= -HalfInterval)
    output = -HalfInterval;
else
    output = output;

*Output++ = output;
oldrfgain = rfgain;
oldoutput = output;
printf("-----IFend-----\n");
ENDLOOP
}

```

FIG. 11B

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